

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

THE DOGBANES OF THE DISTRICT OF COLUMBIA.*

BY GERRIT S. MILLER, JR.

Two dogbanes, *Apocynum cannabinum* and *A. androsæmifolium*, were recorded in the first detailed list of plants of the District of Columbia, published nearly seventy years ago.† In 1876 the same plants were included in the 'Flora Columbiana' of the Potomac-Side Naturalists' Club, without special comment.‡ Five years later Ward relegated the second species to the list of plants whose occurrence in the vicinity of Washington is doubtful.§ At the same time|| he recognized two forms of *Apocynum cannabinum*, the typical *A. cannabinum cannabinum*, of general distribution, and *A. cannabinum glaberrimum*, found only on the flats of the Potomac River bottom at Little Falls. In 1886 Knowlton discovered a species which he recorded as *Apocynum androsæmifolium*,¶ and in 1892** and 1896†† Holm published further records of a plant that he supposed to be the same. In 1897 Greene raised the *Apocynum cannabinum glaberrimum* of Ward to specific rank under the name *A. album*, and at the same time described Holm's *A.*

* Published by permission of the Secretary of the Smithsonian Institution.

† Floræ Columbianæ Prodromus, p. 24, 1830.

‡ Flora Columbiana, p. 16, 1876.

§ Guide to the Flora of Washington and Vicinity (Bull. U. S. Nat. Mus. No. 22), p. 12, 1881.

|| Ibid., p. 97.

¶ Proc. Biol. Soc., Washington, III, p. 108.

** Ibid., VII, p. 118.

†† Ibid., X, p. 36.

androsæmifolium as a new species, *A. medium*.* Thus *Apocynum androsæmifolium* was again eliminated from the District flora, unless Knowlton's plant should prove to have been correctly identified. His specimens, however, cannot now be found. Up to the present time, therefore, three species have been positively recorded from the vicinity of the District of Columbia:† *Apocynum cannabinum* Linnæus, *A. album* Greene, and *A. medium* Greene. But this number must be more than doubled, as I find from an examination of about two thousand plants that *Apocynum androsæmifolium* is actually a member of the flora, while in addition there occur three hitherto undescribed species.

NOMENCLATURE.

Eight names have been based on dogbanes from eastern North America. They are as follows:

Album. *Apocynum album* Greene, Pittonia, III, p. 230, December, 1897, is based on the narrow-leaved, white-flowered plant of the *cannabinum* type common on the shores of the Potomac River near Washington, and throughout its range confined to similar situations. Dr. Greene informs me that the type was collected near Chain Bridge, Montgomery County, Maryland.

Androsæmifolium. [*Apocynum*] *androsæmifolium* Linnæus, Species Plantarum, p. 213, 1753, is the spreading, large-flowered dogbane of the Boreal and Transition zones. Eastern Canada is probably the type locality of the species.

Cannabinum. [*Apocynum*] *cannabinum* Linnæus, Species Plantarum, p. 213, 1753, is an erect, green-flowered plant of eastern North America. The original description leaves no doubt that the name was used by Linnæus in essentially the same sense that it is understood today.

Glaberrimum. [*Apocynum cannabinum*] *a glaberrimum* De Candolle, Prodr. Syst. Nat. Regn. Veg., pt. VIII, p. 439, 1844. The description of this plant (under *Apocynum cannabinum*) is as follows: "*a glaberrimum*. A. Canadense maximum flore minimo herbaceo. Pluk. 35, t. 13 f. 1. (ic. mediocr.) *A. erectum*, etc., ejusd. t. 260. f. 4. *A. cannabinum* R. Br. wern. trans. I. p. 68. Torr. ! fl. un. st. p. 276. *A. cannabinum a* Hook. l. c. t. 139 opt. *A. piscatorium* Dougl. ! mss. ex nostr. specim. hic referendum; eandem vero plantam ad *A. hypericifolium* retulit cl. Hook. l. c. (v. s.)" This name has recently been used by Britton and Brown for the plant described as *A. album* by Greene. The reason for this course is not clear, as none of the descriptions cited by De Candolle refer to the plant in question. Plukenet's figures, for a tracing of which I am

* Pittonia, III, pp. 229-230, December, 1897.

† That is, within a radius of twenty miles from the Capitol.

indebted to Mr. Chas. Bullard, of Cambridge, Mass., both represent broad-leaved plants of the *cannabinum* type. R. Brown's description * refers merely to a lanceolate-leaved, glabrous plant. It contains no reference to any of the peculiar characters of *Apocynum album*. The same is true of the accounts given by Torrey and Hooker. It seems obvious, therefore, that unless better evidence can be brought forward than that furnished by the original description, the name *glaberrimum* is too vaguely defined to supplant the well-established name *album*. At most it can perhaps be used for one of the numerous forms of *Apocynum cannabinum*.

Hypericifolium. *Apocynum hypericifolium* Aiton, Hortus Kewensis, I. p. 304, 1798, is a clasping-leaved green-flowered plant that has not yet been detected in the neighborhood of the District of Columbia. Although recorded from Virginia † the species is now known from the region west of the Alleghenies only.

Incanum. [*Apocynum androsæmifolium*] *β. incanum* De Candolle, Prodr. Syst. Nat. Regn. Veg., pt. VIII, p. 439, 1844, is merely an unusually pubescent individual of *Apocynum androsæmifolium*. Such plants not infrequently occur, but they do not represent a definite form.

Medium. *Apocynum medium* Greene, Pittonia, III, p. 229, December, 1897, is a small-flowered member of the *androsæmifolium* group. It was first recorded by Holm as *Apocynum androsæmifolium*.

Pubescens. *A[po]cynum pubescens* R. Brown, Mem. Wern. Nat. Hist. Soc., I, (1808-10), p. 68, 1811,‡ from Virginia, is a pubescent form of *A. cannabinum*, probably worthy of recognition by name. A plant agreeing closely with the original description is not uncommon in the District of Columbia; and the U. S. National Herbarium contains a specimen collected in Virginia. This is a whitish-flowered species probably distinct from the *A. pubescens* of Britton and Brown.‡

* "*A. cannabinum*, foliis lanceolatis utrinque acutis, glabris, cymis paniculatis, calyce tubum corollæ æquante." This copy I owe to Mr. Chas. Bullard.

† De Candolle, Prodr. Syst. Nat. Regn. Veg., pt. VIII, p. 440, 1844.

‡ Professor N. L. Britton has kindly sent me a copy of the original description of *Apocynum pubescens*. It is as follows: "*A. pubescens*, foliis ovato-oblongis mucronatis; basi obtusis; utrinque cymaque brevioribus pubescentibus, calyce corollam subæquante.

"Hab. In Virginia, Mitchell, in Herb. Banks, [ubi V. S.]."

§ Ill. Flora N. United States, Canada, and Brit. Poss., III, p. 3. 1898.

SYNOPSIS OF THE DOGBANES OF THE DISTRICT OF COLUMBIA.

Corolla conspicuous (white or pink), its lobes spreading or recurved.

Inflorescence both terminal and axillary; corolla terete, broadly campanulate, bright pink, about 8 mm. in length, its tube narrowed in the throat at level of tips of calyx lobes..... *A. ANDROSÆMIFOLIUM* (p. 82).

Inflorescence strictly terminal; corolla pentagonal, urceolate to campanulate or tubular, white or pale pink, 4-7 mm. in length, its tube not narrowed in the throat.

Branches mostly green, ascending; erect white flowers (about 7 mm. long) in large, compact, rather flat cymes; corolla campanulate..... *A. SPECIOSUM* (p. 83).

Branches mostly strongly tinged with reddish purple, those at least of the upper part of the plant widely spreading; suberect white or pale pink flowers (4-6 mm. long) in small, loose, irregular cymes; corolla tubular to urceolate.

Calyx lobes broad, much shorter than tube of pinkish, suburceolate or tubular corolla; flowers about 6 mm. in length..... *A. MEDIUM* (p. 84).

Calyx lobes narrow, about as long as tube of white, urceolate corolla; flowers about 5 mm. in length..... *A. URCEOLIFER* (p. 85).

Corolla inconspicuous (greenish or whitish), its lobes erect or nearly so.

Leaves few, spreading or drooping on slender petioles which are usually three times the length of the flowers..... *A. NEMORALE* (p. 87).

Leaves many, ascending on robust petioles which are usually scarcely longer than flowers.

Leaves glabrous, from one-fifth to one-fourth as broad as long; flowers essentially white; plant very slender and much branched..... *A. ALBUM* (p. 88).

Leaves pubescent on underside at least, from one-third to one-half as broad as long; flowers varying from dull green to white; plant stout and relatively less branched..... *A. CANNABINUM* (page 86).

***Apocynum androsæmifolium* Linnaeus.**

(Pl. II, Fig. 1.)

1753. [*Apocynum*] *androsæmifolium* Linnaeus, *Species Plantarum*, p. 213.

1844. [*Apocynum androsæmifolium*] *β. incanum* De Candolle, *Prodr. Syst. Nat. Veg.*, pt. VIII, p. 439.

1898. *Apocynum androsæmifolium* Britton and Brown, *Illustrated Flora Northern United States, Canada, and Brit. Poss.*, III, p. 3.

Type locality.—Probably eastern Canada.

Geographic distribution.—Eastern North America from Newfoundland (specimen in U. S. Nat. Herb.) to Georgia (Britton and Brown), west to the plains.

Zonal position.—*Apocynum androsæmifolium* appears to be an inhabitant of the Transition zone and Lower Boreal zone, occasionally reaching the Upper Austral zone, but probably by accident.

Habitat.—Thickets and fields.

Characters.—*Plant* robust, 1 to 1.5 m. high, from a perennial horizontal rootstock; *branches* dichotomously widely spreading, glabrous, strongly tinged with purple; *leaves* spreading, mucronate tipped (about 55 x 40 mm.), the uppermost ovate oblong, the lower broadly rounded at base, the upper slightly narrowed; upper side of leaves glabrous, dusky green, underside of leaves pale, and finely but inconspicuously pubescent; *petioles* slender, mostly about 5 mm. in length, finely pubescent on underside; *inflorescence* in small, irregular, terminal and axillary cymes of few nodding flowers, the axillary clusters generally the smaller; cymes usually shorter than leaves; *pedicels* 5–10 mm. in length, subulate-bracted at base; *calyx* glabrous, its segments narrow, generally less than half as long as corolla tube; *corolla* bright pink, in fully developed flowers about 8 mm. long, widely campanulate, its tube terete, the throat narrowed at level of tip of calyx lobes; corolla segments rounded at tip, considerably more than half as long as tube, and when fully developed conspicuously recurved; *pods* drooping, about 170 mm. in length.

Remarks.—*Apocynum androsæmifolium* is immediately recognizable among the species occurring in eastern North America by its ovate leaves, and large, bright pink, nodding flowers in partly axillary clusters, and by the terete corolla tube, distinctly narrowed in the throat. The outline of the corolla varies much in different stages of growth. Some of the forms that it assumes in its development from the bud to the fully grown flower are shown in the figures (see Pl. II, Fig. 1). Throughout its growth, however, the corolla tube is strictly terete, while in all of the plants with which the species might be confused the pentagonal contour of the corolla is evident even in the half-grown buds. The characteristic form of the corolla is for the most part lost in dried specimens. On account of the dichotomous branching of the stem, there can be no distinct central flower cluster as in *A. cannabinum*.

The only specimens of this species positively known to have been collected in the vicinity of the District of Columbia are two plants which I found at the roadside between Sligo Branch and Paint Branch, Montgomery County, Maryland, on June 25, 1899.

***Apocynum speciosum* sp. nov.**

(Pl. II, Fig. 2.)

Type No. 340,395, United States National Herbarium, collected in dry old field, at side of road leading from Silver Spring to Sligo Branch, Montgomery County, Maryland, June 25, 1899, by Gerrit S. Miller, Jr.

Geographic distribution.—*Apocynum speciosum* is at present known from two localities, Sligo and Glen Echo, both in Montgomery County, Maryland.

Zonal position.—From its manner of occurrence this species appears to be a member of the Upper Austral flora.

Habitat.—Fields and roadsides.

Characters.—*Plant* robust, .75 to 1.25 m. high, from a perennial horizontal rootstock, *branches* ascending, glabrous, green; *leaves* ascending, oblong, inconspicuously mucronate tipped, the lower (mostly about 70–80 x 35–45) slightly rounded at base, the uppermost tapering at each end; upperside of leaves dark green, glabrous, underside slightly paler and essentially glabrous except along the veins where a fine pubescence may be detected; *petioles* 4–8 mm. in length, slender above, shorter and more robust below, finely pubescent on underside; *inflorescence* in large compact, flat-topped strictly terminal cymes of very many erect flowers, the cymes at first exceeded in length by the leaves, but afterwards slightly longer; *pedicels* about 4 mm. in length subulate-bracted at base; *calyx* very slightly pubescent (this character probably variable), its segments narrow, half as long as corolla tube; *corolla* white or very faintly tinged with pink inside, about 6–7 mm. in length, campanulate, its tube distinctly pentagonal, the throat not narrowed; corolla segments pointed, slightly more than half as long as tube, spreading but not recurved; *Pods* drooping, about 70 to 120 mm. in length.

Remarks.—In this plant the habit is almost precisely similar to that of *A. cannabinum*. The branches are erect, very indistinctly, if at all, dichotomous, the leaves ascending, the flowers upright, and the inflorescence is in distinctly flat-topped cymes, the central of which, at the end of the main stem, is usually but not always the largest, and earliest to flower. As the lateral branches rise toward or above the level of the central head they in turn produce flat, terminal clusters, thus prolonging the flowering season from before the middle of June nearly to the middle of August. Accompanying the luxuriant inflorescence of this plant is an unusually profuse development of fruit, which often hangs in dense clusters from the lower part of a cyme which above is still a mass of flowers.

***Apocynum medium* Greene.**

(Pl. II, Fig. 3.)

1892. *Apocynum androsæmifolium* Holm, Proc. Biol. Soc. Washington, VII, p. 118 (not of Linnaeus 1753).

1897. *Apocynum medium* Greene, Pittonia, III, p. 229, December, 1897.

Type locality.—Vacant lots bordering 12th St., in Brookland, D. C.

Zonal position.—*Apocynum medium* will probably be found to occur throughout the upper Austral zone of the eastern United States. It is to be looked for also in the lower part of the Transition zone.

Habitat.—Dry, open ground.

Characters.—*Plant* slender, seldom more than 1 m. high, from a perennial horizontal rootstock; *branches* dichotomously widely spreading, gla-

brous, reddish purple; *leaves* spreading, oblong, mucronate-tipped, the lowermost (about 85 x 40) somewhat rounded at base, the uppermost tapering at each end; upperside of leaves dark, clear green, glabrous; underside yellowish green, finely pubescent; petioles about 5 mm. in length, slender above, more robust below, finely pubescent; *inflorescence* in small rather compact, strictly terminal but not flat-topped, cymes of numerous suberect flowers, the cymes usually exceeded by the leaves; *pedicels* 2-3 mm. in length, subulate bracted at base; *calyx* finely pubescent (this character probably inconstant), its segments broad, distinctly less than half as long as corolla tube; *corolla* light pink, or white strongly blotched with pink inside, about 5-6 mm. in length, suburceolate or tubular, its tube distinctly pentagonal, the throat not narrowed, corolla segments rounded, half as long as tube, spreading but not recurved; *Pods* drooping, about 90 mm. in length.

Remarks.—*Apocynum medium* has essentially the habit of *A. androsæmifolium* though its peculiarities are slightly less pronounced. Together with *A. urceolifer* it is readily distinguished from *A. androsæmifolium* by its differently shaped leaves, much smaller suberect flowers in strictly terminal racemes, and by the distinctly pentagonal corolla tube. The form of the corolla tube varies in perfectly developed flowers from faintly suburceolate to essentially short tubular, though the first is the more usual. The calyx segments are very short, conspicuously less than half as long as corolla tube. In drying, the corolla shrinks more than the calyx, so that in herbarium specimens the latter appears relatively longer than it actually is. I have examined one hundred or more living plants of this species growing in vacant lots on 12th St., Brookland, D. C., where Dr. Greene informs me his original specimens were collected.

***Apocynum urceolifer* sp. nov.**

(Pl. II, Fig. 4.)

Type No. 340,396, United States National Herbarium, collected on open, dry hillside at Capitol View Park, Montgomery County, Maryland, July 2, 1899, by Gerrit S. Miller, Jr.

Geographic distribution.—This species has been collected at the type locality and at Brightwood, D. C.

Zonal position.—*Apocynum urceolifer* is probably a member of the Upper Austral flora.

Habitat.—Fields and roadsides.

Characters.—*Plant* slender, usually less than 1 m. high, from a perennial horizontal rootstock; *branches* dichotomously widely spreading, glabrous, strongly tinged with reddish purple; *leaves* spreading, oblong, mucronate tipped, the lowermost (about 90 x 40) rounded or subcordate at base, the uppermost tapering at each end, but more abruptly at base; upperside of leaves, clear green, glabrous; underside yellowish green, finely pubescent; petioles 2-4 mm. in length, finely pubescent on lower side; *inflorescence* in small, rather compact, but not flat-topped, strictly terminal cymes of numerous suberect flowers, the cymes at first exceeded by the leaves,

finally slightly longer; pedicels 3-5 mm. in length, subulate-bracted at base; calyx glabrous or pubescent, its segments very narrow, generally as long as corolla tube; *corolla* white or just perceptibly tinged with pink; about 4-5 mm. in length, urceolate, its tube conspicuously pentagonal, the throat not narrowed, corolla segments pointed, slightly more than half as long as tube, spreading but not recurved; *Pods* drooping, about 90 mm. in length.

Remarks.—Although at first sight *Apocynum urceolifer* rather closely resembles *A. medium*, the two plants are readily distinguishable. In habit they are essentially the same, but *A. urceolifer* is smaller and its stems are usually less strongly tinged with reddish purple, though in all probability neither character is constant. Its flowers are smaller than those of *A. medium*, and generally pure white, though sometimes faintly tinged with pink. The corolla is more conspicuously pentagonal, and very noticeably contracted at base of segments. The corolla segments are relatively longer and narrower than in *A. medium*, and distinctly pointed instead of rounded or obscurely pointed at tips. The calyx lobes are generally as long as the corolla tube, and frequently longer, sometimes a little spreading at tips, while in *A. medium* they are less than half as long as corolla tube and always closely appressed.

I have seen this plant growing at the type locality only. It is there common on the southeast slope of the hill directly north of the quarry. Mr. W. R. Maxon has collected it at the side of the Military Road, between Brightwood, D. C., and Rock Creek.

***Apocynum cannabinum* Linnaeus.**

(Pl. II, Figs. 6-7.)

1753. [*Apocynum*] *cannabinum* Linnaeus, Sp. Plant., p. 213.
 1811. *A[pocynum] pubescens* R. Brown, Mem. Wern. Nat. Hist. Soc., I, p. 68 (Virginia).
 1844. [*Apocynum cannabinum*] *a glaberrimum* De Candolle, Prodr. Syst. Nat. Reg. Veg., pt. VIII, p. 434 (eastern North America).
 1881. *Apocynum cannabinum* Ward, Guide to Flora of Washington and Vicinity (Bull. 22, U. S. Nat. Mus.), p. 97.
 1898. *Apocynum cannabinum* Britton and Brown, Ill. Flora N. United States, Canada, and Brit. Poss., III, p. 3.

Type locality.—Probably eastern Canada.

Geographic distribution.—Eastern United States and southeastern Canada. Western limits of range not known.

Zonal position.—Transition and Austral zones.

Habitat.—Fields, thickets, and open woods.

Characters.—*Plant* robust, 1 to 1.75 m. high, from a perennial, horizontal, widely spreading rootstock; *branches* ascending, glabrous to densely velvety pubescent, green to reddish purple; *leaves* ascending, mucronate tipped, usually oblong and slightly more rounded at base than at tip, but often, especially the uppermost, tapering equally at each end, and lowermost frequently slightly cordate; dimensions when full grown about 120 x 55; upperside of leaves green, varying much in shade, generally glabrous but occasionally velvety pubescent; underside paler and usually

tinged with yellow, often densely pubescent, and seldom if ever without trace of pubescence, at least on the veins; *petioles* 3-7 mm. in length, slender above, shorter and robust below, pubescent or glabrous on underside; *inflorescence* in strictly terminal cymes, the larger of which are distinctly flat topped, the central cyme always developing first, and generally the largest; cymes composed of very many erect flowers and generally exceeded by the leaves; *pedicels* 1-4 mm. in length, subulate-bracted at base, glabrous or pubescent; *calyx* glabrous or pubescent, its segments very variable in form, but usually about equal to corolla tube in length, or slightly shorter, the tips appressed or widely spreading; *corolla* varying in color from white to dull green, and in length from 3 mm. to 4.5 mm., generally glabrous, but often pubescent, pentagonal, tubular or slightly campanulate; corolla segments equal to or shorter than tube, rounded or bluntly pointed at tips, erect or very slightly spreading, the margins usually slightly revolute; pods drooping, 130-200 mm. in length.

Remarks.—*Apocynum cannabinum* is a highly polymorphic species, much in need of critical study. It is readily distinguished, among the species known to occur in the eastern United States, by its robust, upright habit, large, short-petioled leaves, and small, green, greenish, whitish, or white flowers, with erect corolla lobes. Within these limits, however, variation is so great as to suggest the existence of numerous partly or perhaps completely segregated forms. Of those that occur in the District of Columbia, the most strongly marked is the *A. pubescens* of R. Brown. The whole plant (or the upper part at least) is densely velvety pubescent, and the upper leaves are unusually short, broad, and closely set. Flowers greenish or white. This is probably not the *A. pubescens* of Britton and Brown. Glabrate and narrow-leaved forms occur, and others of unusually slender habit; but I have seen none that bridge the gap between *A. cannabinum* and either of the following species.

***Apocynum nemorale* sp. nov.**

Type No. 340,397, United States National Herbarium, collected at roadside in woods near end of Chain Bridge, Fairfax County, Virginia, July 14, 1899, by Wm. Palmer.

Geographic distribution.—This species is now known only from the type locality and the Virginia shore of the Potomac River at Great Falls.

Zonal position.—Probably confined to the Upper Austral and Transition zones.

Habitat.—Open woods.

Characters.—Like *Apocynum cannabinum* Linnæus, but with relatively few, spreading or drooping, leaves on slender petioles (usually 10-15 mm. in length) two or three times as long as flowers; corolla glabrous, greenish.

Remarks.—I should hesitate to separate this plant from *Apocynum cannabinum* were not its characters, trivial though they appear on paper, striking and constant in specimens, especially those living or freshly collected. Furthermore, while *A. cannabinum* occasionally occurs in open woods, together with *A. nemorale*, it never, so far as known, shows any tendency to assume the characters of the latter.

***Apocynum album* Greene.**

(Pl. II, Fig. 5.)

1881. *Apocynum cannabinum* var. *glaberrimum* Ward, Guide to Flora of Washington and Vicinity (Bull. 22, U. S. Nat. Mus.), p. 97 (not of De Candolle, 1844).
 1897. *Apocynum album*. Greene, Pittonia, III, p. 230. December, 1897.
 1898. *Apocynum cannabinum glaberrimum* Britton and Brown, Ill. Flora, N. United States, Canada and Brit. Poss., III, p. 3 (not of De Candolle, 1844).

Type locality.—Shore of Potomac River, near Chain Bridge, Montgomery County, Maryland.

Geographic distribution.—The range of *Apocynum album* is not well understood. Britton and Brown say, "range apparently nearly of the type, but more abundant northward." I have examined specimens from various points in Maryland along the shores of the Potomac River from Old Town to Marshall Hall, also from mouth of Tucquan Creek, Lancaster County, Pennsylvania; Stratford, Connecticut; and Ithaca, New York.

Zonal position.—Probably confined to the Upper Austral and Transition zones.

Habitat.—Beaches and river shores.

Characters.—Like *Apocynum cannabinum* Linnæus, but of more slender, branching habit, and with smaller, much narrower leaves and essentially white flowers. The largest leaves are about 110 mm. in length by 20–30 mm. in breadth, those of the upper part of the plant much smaller (about 60 x 15). They are oblong-lanceolate in form, those of the upper part of the plant acute at each end, those of lower part of plant rounded at base. All are mucronate tipped and wholly glabrous throughout. Petioles 2–3 mm. in length. Stems green, very slightly purple tinged, slender and much branched, the branching more profuse than in *A. cannabinum*, but of the same character. Inflorescence in terminal irregular cymes never as large as those commonly met with in *A. cannabinum*. Calyx lobes about as long as corolla tube or slightly shorter. Corolla about 4 mm. in length, white, often faintly tinged with green, pentagonal, short tubular or faintly campanulate, the upright lobes slightly more than half as long as tube, rounded at tips. Pods about 125 mm. in length. Rootstock horizontal, perennial, widely branching.

Remarks.—*Apocynum album* is so different from *A. cannabinum* as to require no very close comparison. The peculiar character of its habit, leaves, and inflorescence sharply differentiate it. The white or nearly white flowers, however, are not, taken alone, diagnostic, as forms of *A. cannabinum* frequently occur in which the corolla is equally white.

This plant appears to be strictly confined to beaches and river 'bottoms.' Near Washington it occupies, to the exclusion of other members of the genus, the flats and islands of the Potomac, seldom if ever growing on land that is not flooded at high water. Mr. E. A. Preble has sent me specimens from a small island in the Potomac at Oldtown, Maryland, and Mr. Wm. Palmer has collected it at Marshall Hall.

EXPLANATION OF PLATE II.

(All figures three times natural size.)

- Fig. 1. *Apocynum androsæmifolium* Linnæus, from Maryland.
- Fig. 2. *Apocynum speciosum* Miller, topotype.
- Fig. 3. *Apocynum medium* Greene, topotype.
- Fig. 4. *Apocynum urceolifer* Miller, topotype.
- Fig. 5. *Apocynum album* Greene, topotype.
- Fig. 6. *Apocynum cannabinum* Linnæus, large-flowered form, from Kensington, Maryland.
- Fig. 7. *Apocynum cannabinum* Linnæus, small flowered form, from Capitol View Park, Maryland.